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Surgical oncology



GURU HOSPITAL

NEW CANCER TREATMENT WITH NEW TECHNOLOGY
Pandikovil Ring Road, Madurai

CANCER -THE WAY TO SUCCESS

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CONCEPT IN ONCOLOGY ?



- **DIAGNOSE THE CANCER**

- **EVALUATING THE TUMOR BIOLOGY**

- **STAGING THE DISEASE**

- **ASSESS THE GENERAL CONDITION OF THE PATIENT**

- **FORMULATE THE TREATMENT**



உந்நாள் அளவும் பீணியளவும் காலமும் கந்நாள் கருதிச் செயல்

(திருக்குறள் - 949
அதிகாரம் - மருந்து)



AIM- ONCOLOGY

- Cure the cancer
- Minimize the treatment related complications



உன்னால் முடியும்

உன்னால் முடியும்

GAP - HOW MUCH ?

CURE

VS

TREATMENT RELATED COMPLICATIONS



NARROW



உன்னால் முடியும்

உன்னால் முடியும்

APPROACH



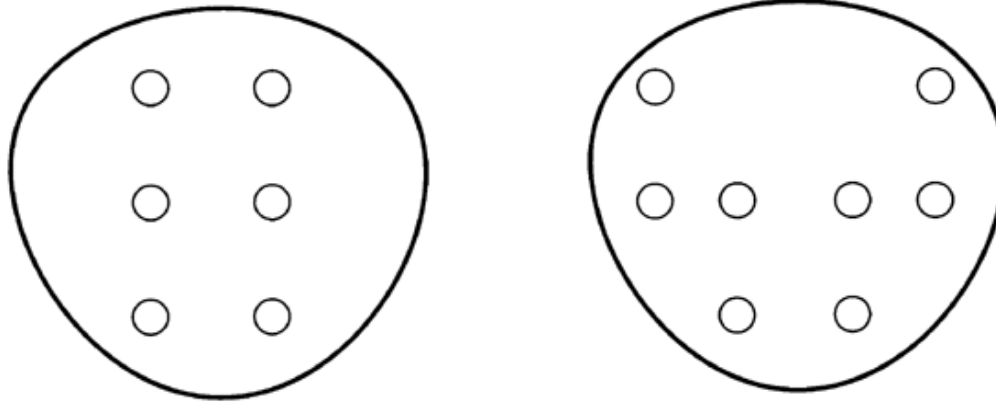
BIOPSY PRINCIPLE

- Tissue Manipulation should be Minimum
- FNAC
- Trucut biopsy
- Small lesion – excision biopsy
- Large lesion – incision biopsy



NODAL METASTASIS - PATTERN

- Nodal metastasis has a patchy distribution & multifocal



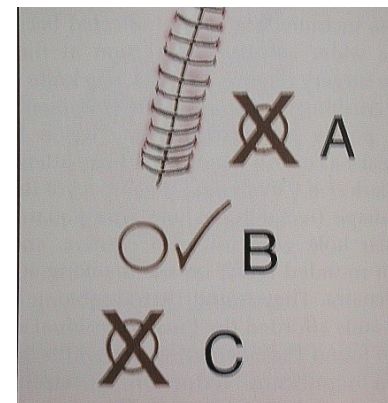
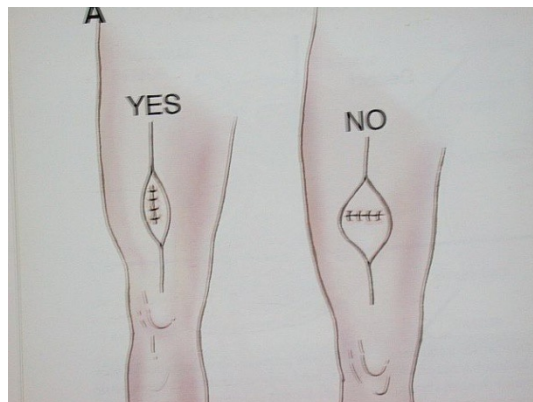
Positive is Positive

Negative need not be Negative



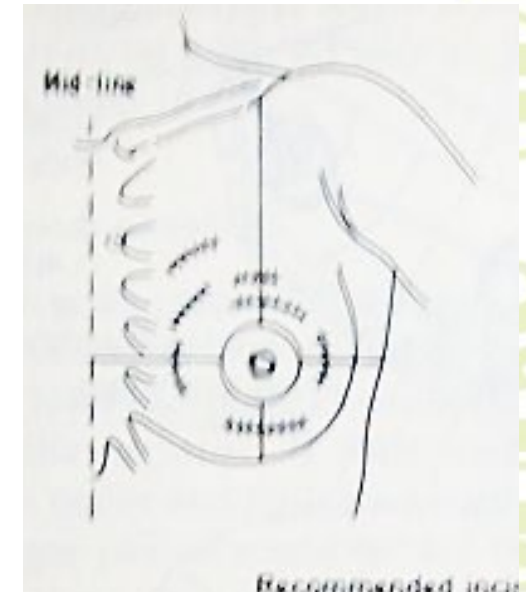
INCISIONAL BIOPSY - LIMBS

- Smallest Longitudinal incision to provide adequate specimen.
- Transverse incision contraindicated in the Limbs
- Shortest route to the tumor – minimal tissue disturbance and avoid raising flaps.
- Drains – not as a routine. If used exit NEAR the wound and not away or by the side.



BIOPSY INCISIONS - BREAST

- Incision must be transverse or curvilinear
- Scars should be included in the future definitive incision
- . NO VERTICAL INCISION Adversely affects the plan of treatment both in definitive surgery & RT planning



LOCAL ASSESSMENT

- CLINICAL
- CT SCAN
- MRI SCAN



NODAL METASTASIS

- In carcinoma lymph nodal involvement is a regional disease (in principle lymphatic basin)
- When the spread is beyond, it is considered as metastatic disease
- In sarcoma it is always metastasis



REGIONAL VS METASTASIS

- | | | |
|-------------|---|-----------------------------|
| ▪ Esophagus | - | Celiac/Supraclavicular node |
| ▪ Stomach | - | N3 nodes |
| ▪ Pancreas | - | Celiac nodes |
| ▪ Colon | - | S.M.A / I.M.A nodes |
| ▪ Rectum | - | Common iliac nodes |



METASTATIC WORKUP

Based on the natural history of the disease, images of the common site of metastasis to be done.

- Soft tissue sarcoma – CT lung
- Breast cancer – Bone scan



ASSESSMENT



ROAD MAP..

Multidisciplinary Tumor Board

Finalize Tumor staging

Formulates treatment plan



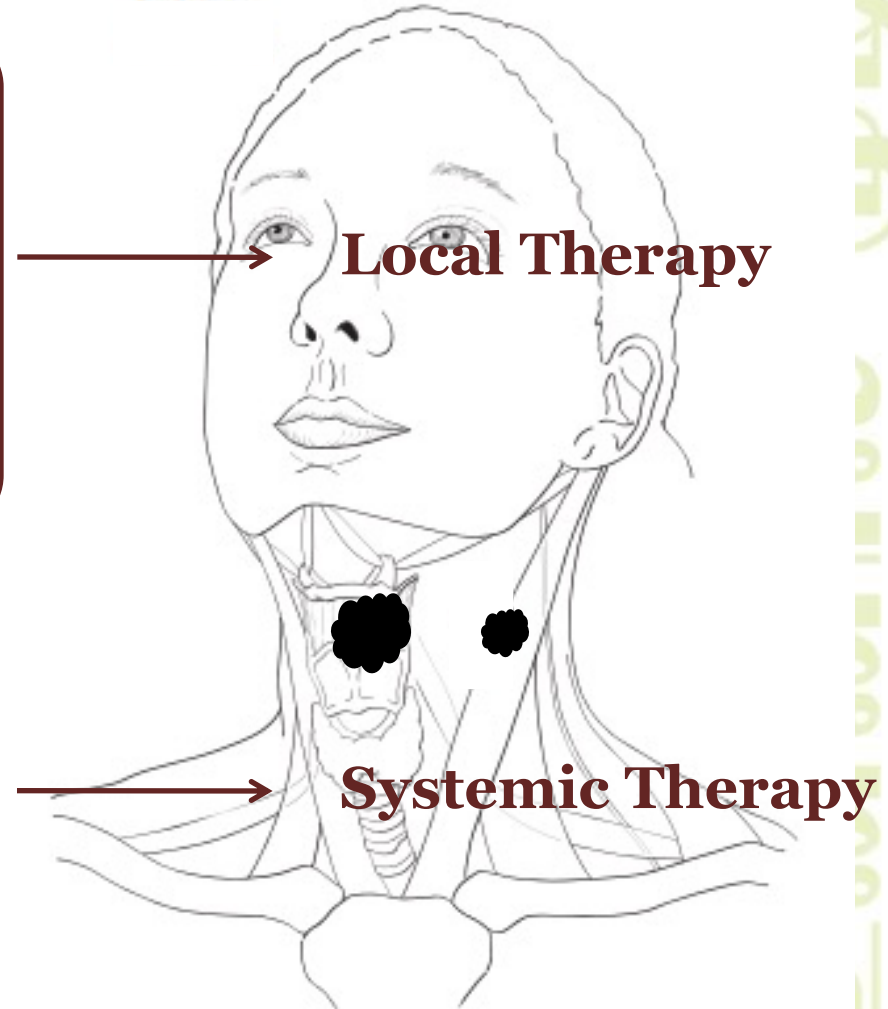
Primary Tumor (Local Disease)



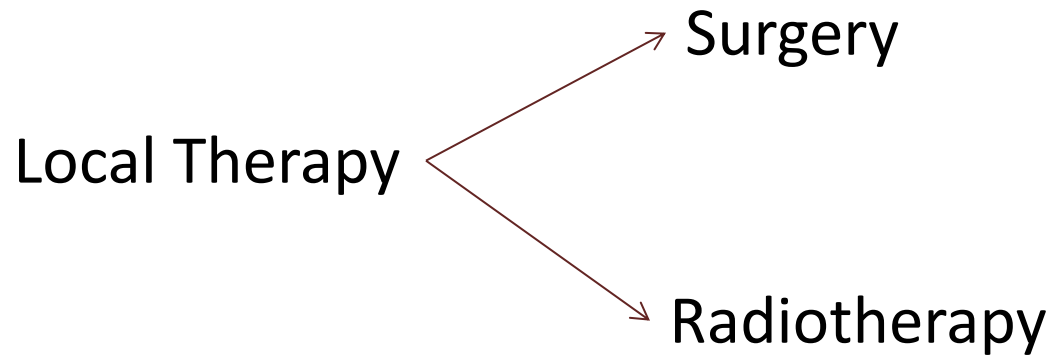
Lymph Node (Regional Disease)



Lung Mets (Systemic Disease)



LOCOREGIONAL CONTROL



ADVANTAGES OF SURGERY OVER RT

- Accurate staging is possible.
- Treatment duration- short
- Patient satisfaction by removing the tumor.

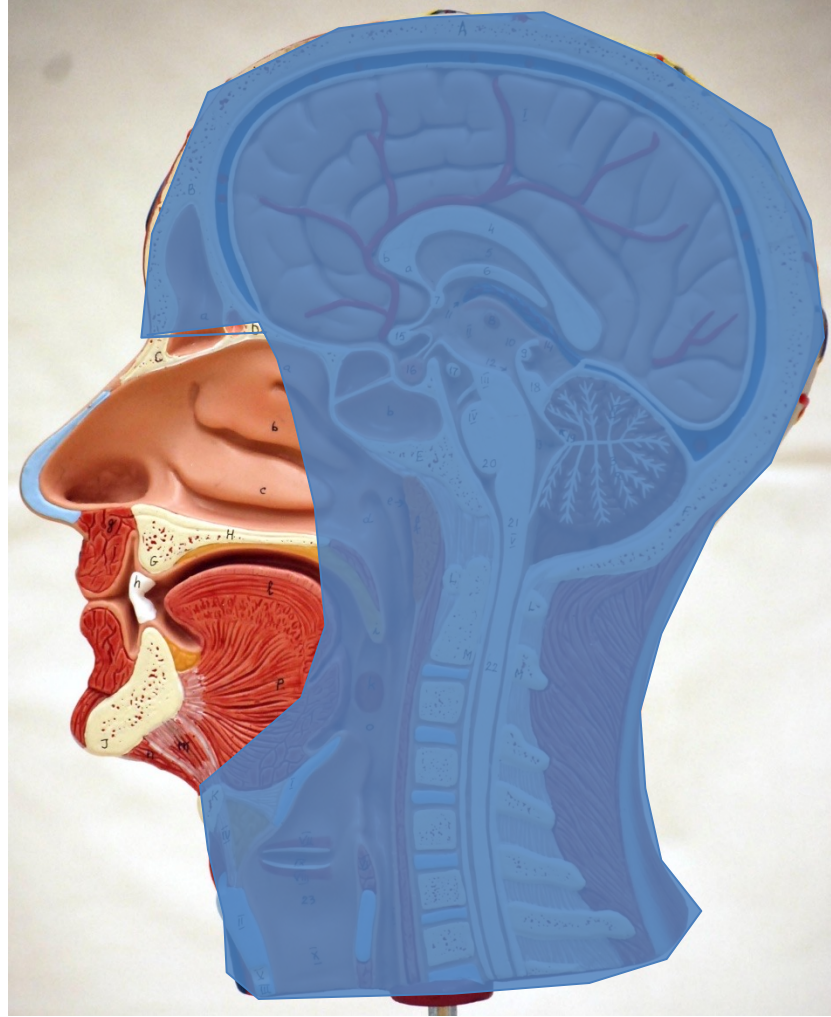


ADVANTAGES OF RT OVER SURGERY

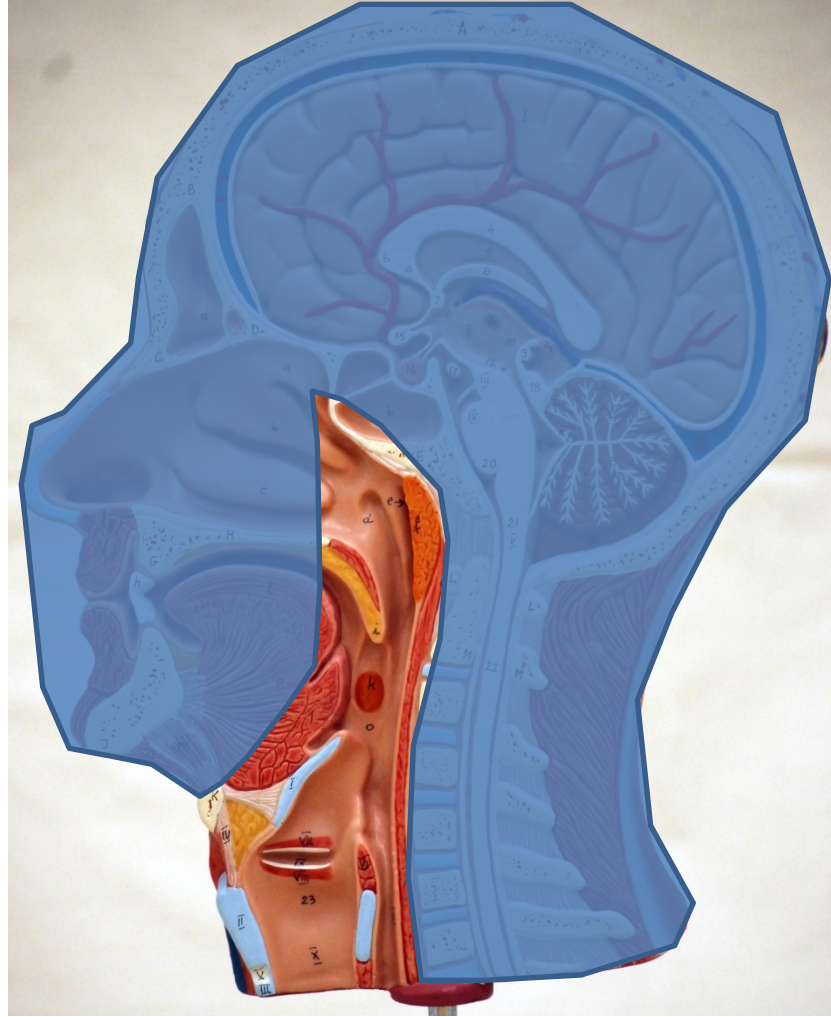
- Difficulty in inaccessible area.
- Giving clearance is difficult if the tumor is adjacent to vital structures.
- Loss of organ and cosmetic disfigurement.



Sx



RT



ROAD MAP..

- **EARLY CANCER – SURGERY**
- **LOCALLY ADVANCED CANCER - NEOADJUVANT TREATMENT**
- **METASTATIC CANCER -PALLIATIVE**

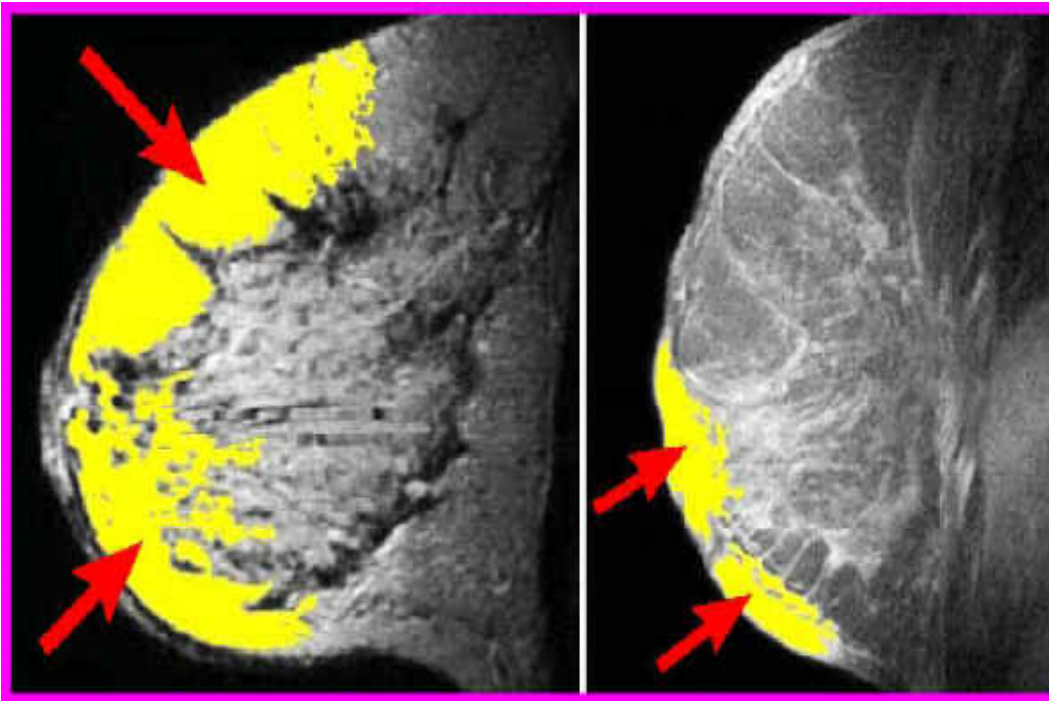


WHY NEOADJUVANCT THERAPY ?

- Shrinkage of tumor and downsizing the tumor.
- Sterilizing the tumor and peritumoral area and surgery will be oncologically sound.
- Organ preservation is possible - breast and rectum.



NEOADJUVANCT RESPONSE



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உன்னால் முடியும்

உன்னால் முடியும்

BIOLOGY OF CANCER



TUMOR BIOLOGY

- WHAT IS ?
- BEHAVIOUR OF THE TUMOUR
(aggressive vs indolent)
- Dictated by the the molecular genetics

How to evaluate ?

- BY STUDYING THE TUMOR MARKER
- MOLECULAR GENETICS

HOW IT WILL BE HELPFUL?

- ASSESS THE PROGNOSIS
- PLAN FOR TARGETED THERAPY

ANY BIOLOGICAL FACTOR
INFLUENCE THE OUTCOME,

IT IS INCORPORATED IN THE STAGING



SARCOMA

GRADE

is incorporated in stage grouping



TESTIS AND MELANOMA

TUMOR MARKER

is incorporated in stage grouping



THYROID CANCER

AGE

is incorporated in stage grouping



STAGING- WHEN ?

STAGING
ALWAYS
POST SURGICAL



CONCEPT



ONCOLOGICAL CONCEPT VS TECHNIQUE OF SURGERY



Concrete Frame Structures

UnderstandConstruction.com

Technique of Surgery

Foundations

Concept

UnderstandConstruction.com

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WHY MULTIMODAL ATTACH ?



WHY MULTIMODAL TREATMENT ?

- High success rate
- Toxicity of individual treatment is less
- Treatment efficacy will be high



MULTIMODAL TREATMENT

Organ preservation....

there is a difference....



TRADITIONAL SURGERY



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உன்னால் முடியும்

உன்னால் முடியும்

TODAY



உன்னால் முடியும்

உன்னால் முடியும்

SURGICAL PRINCIPLE



T 1 2 3

N 1 2

T 4

operable

N 3

M

inoperable



PRINCIPLES

- Margins
- Surgical planes
- Nodal dissection & count
- Ligating artery at its origin



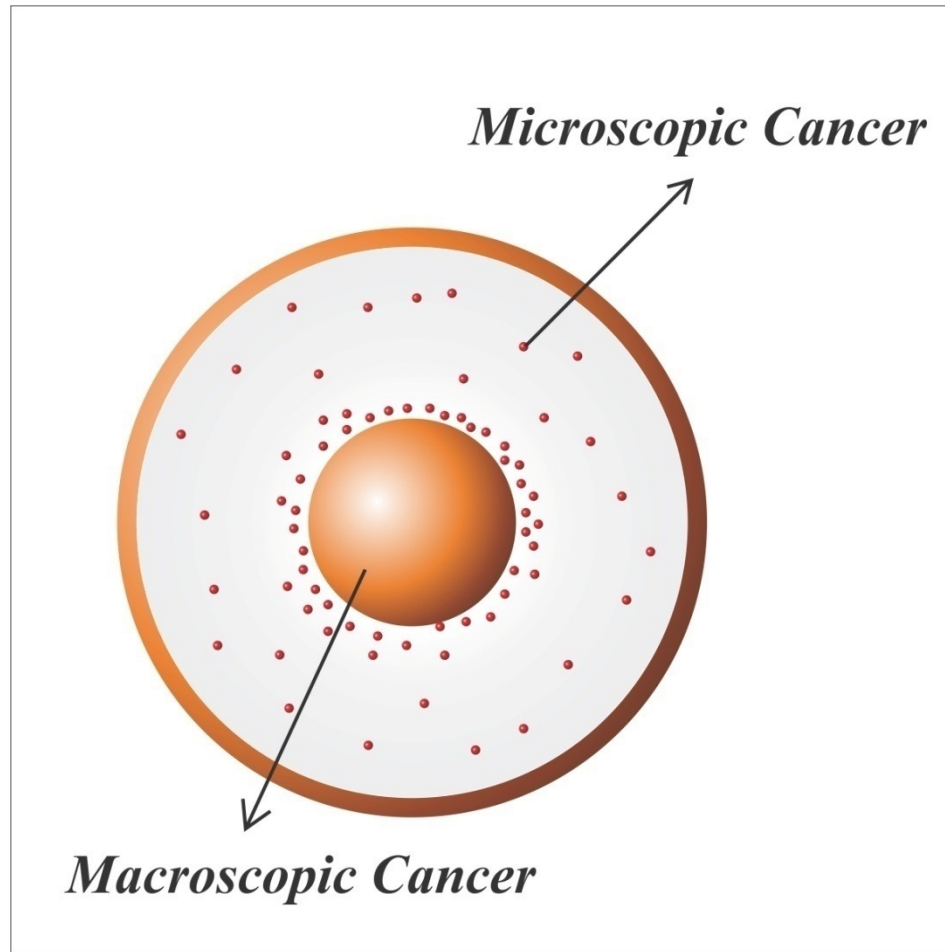
ONCOLOGICAL NORMS

**Adequate Surgery + Adjuvant therapy
is the Standard treatment**

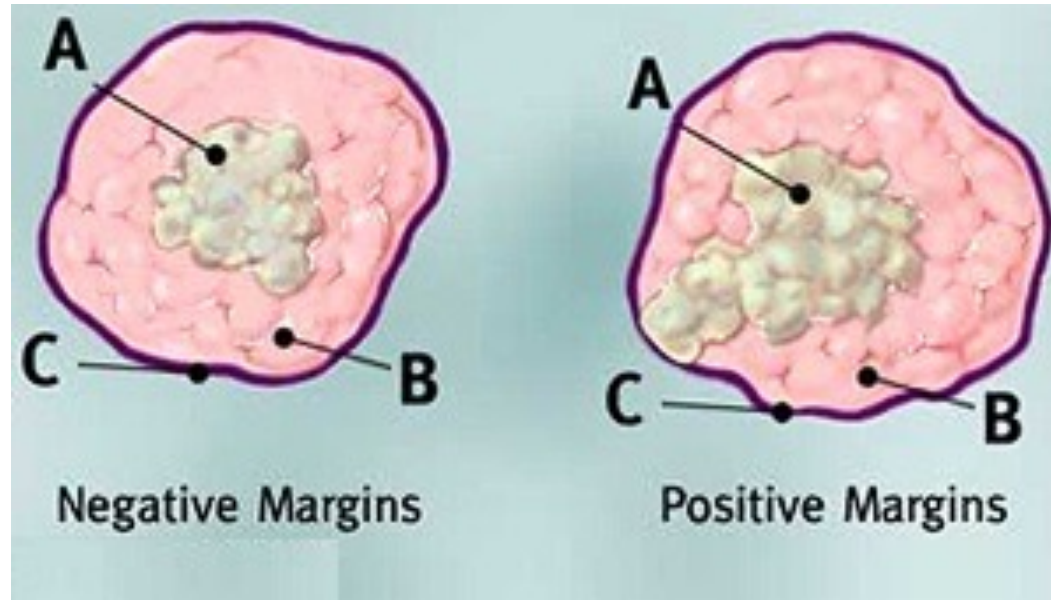
**Adjuvant treatment is not an answer to
incomplete surgery**



LOCAL BIOLOGY - MARGINS



Negative Margins



ADEQUATE SURGERY-HOW MUCH CLEARANCE?

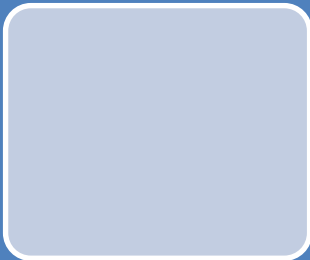
- Esophagus - 10 cm
- Stomach - 5 cm
- Hepatobiliary - 1 cm
- Pancreas - 1 cm
- Colon - 5 cm



TYPE OF MARGINS

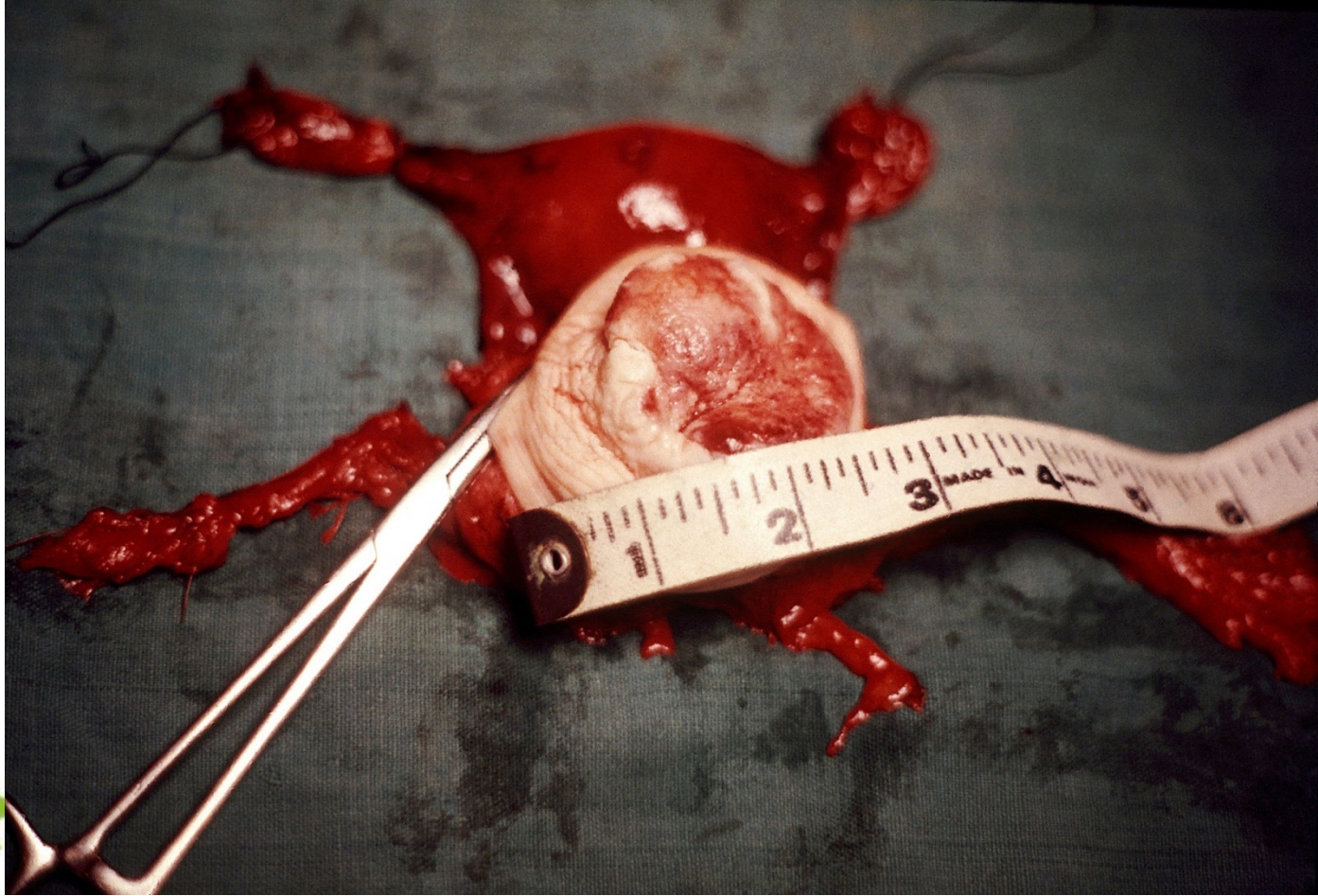


1 CRM



2 linear margin





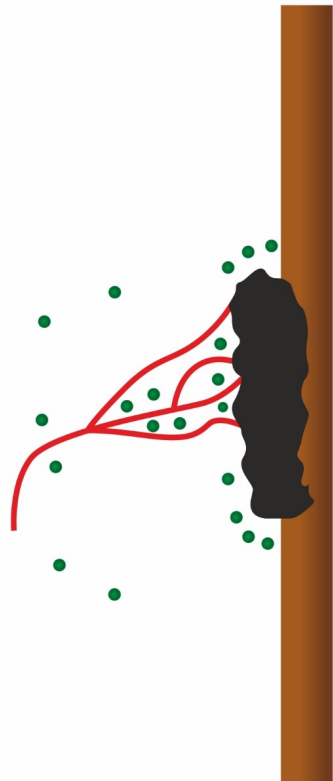
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உன்னால் முடியும்

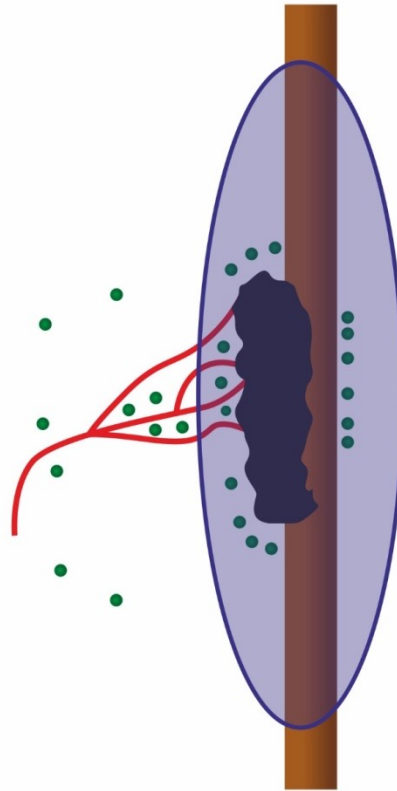
N1- PERILUMINAL

N2-ALONG THE NAMED VESSELS

N3- INTRAPERITONEAL NODES

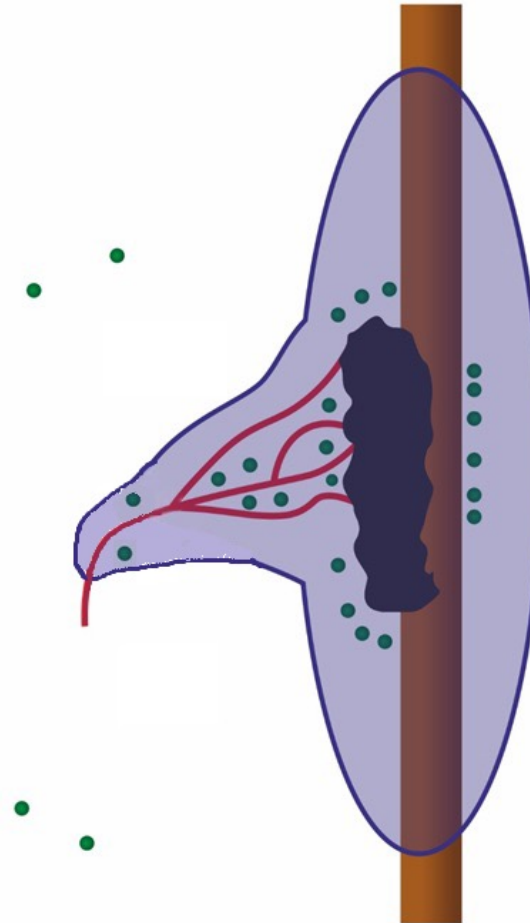


IS IT A ADEQUATE SURGERY ?



R0 RESECTION

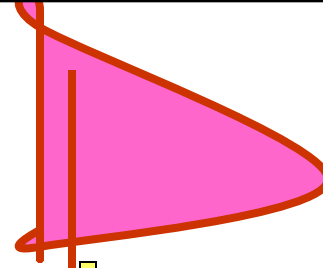
- **WHAT IS ADEQUATE SURGERY ?**



CRM
MORE IMPORTANT THAN
linear margin



What follows is.....

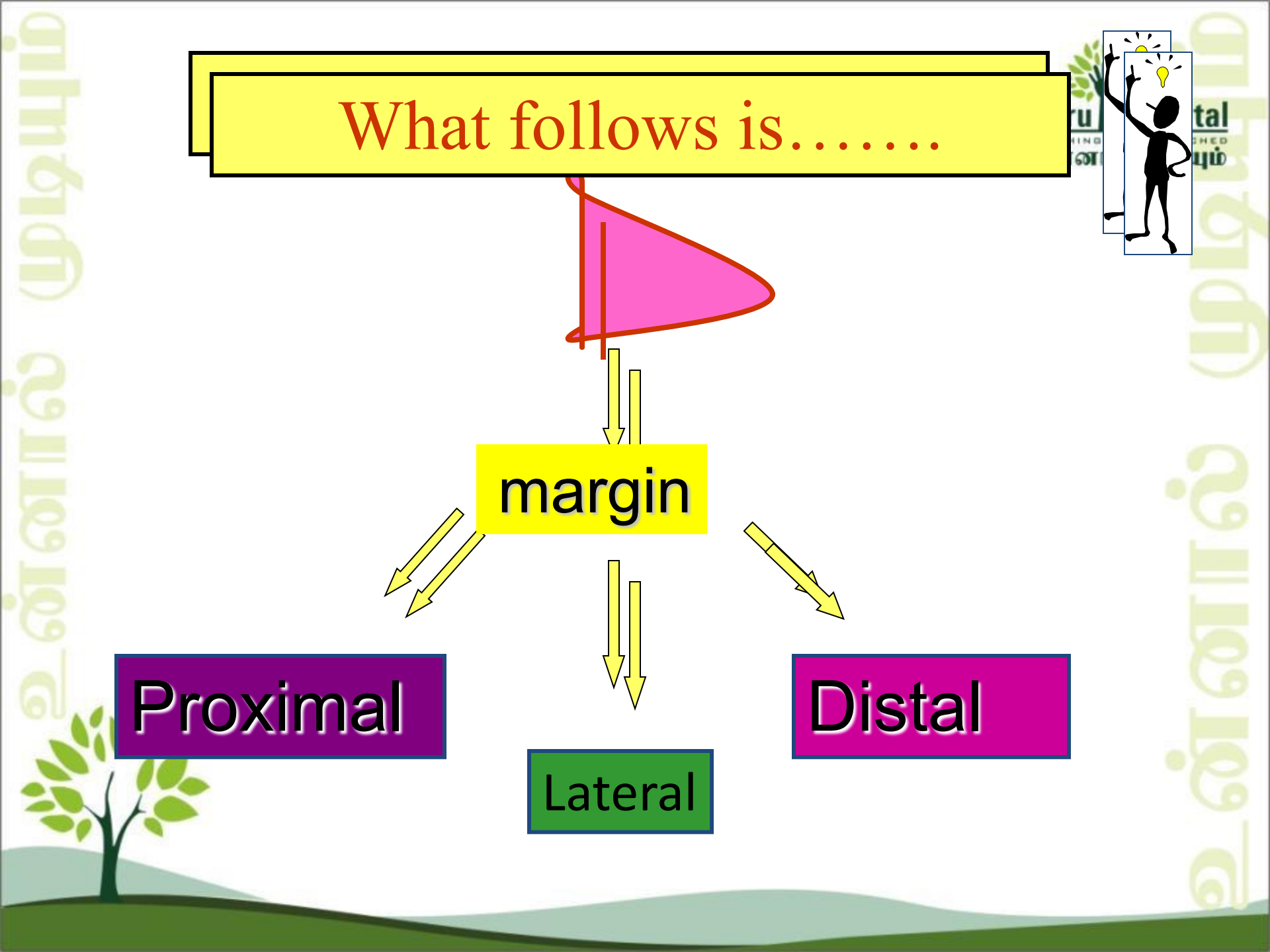


margin

Proximal

Distal

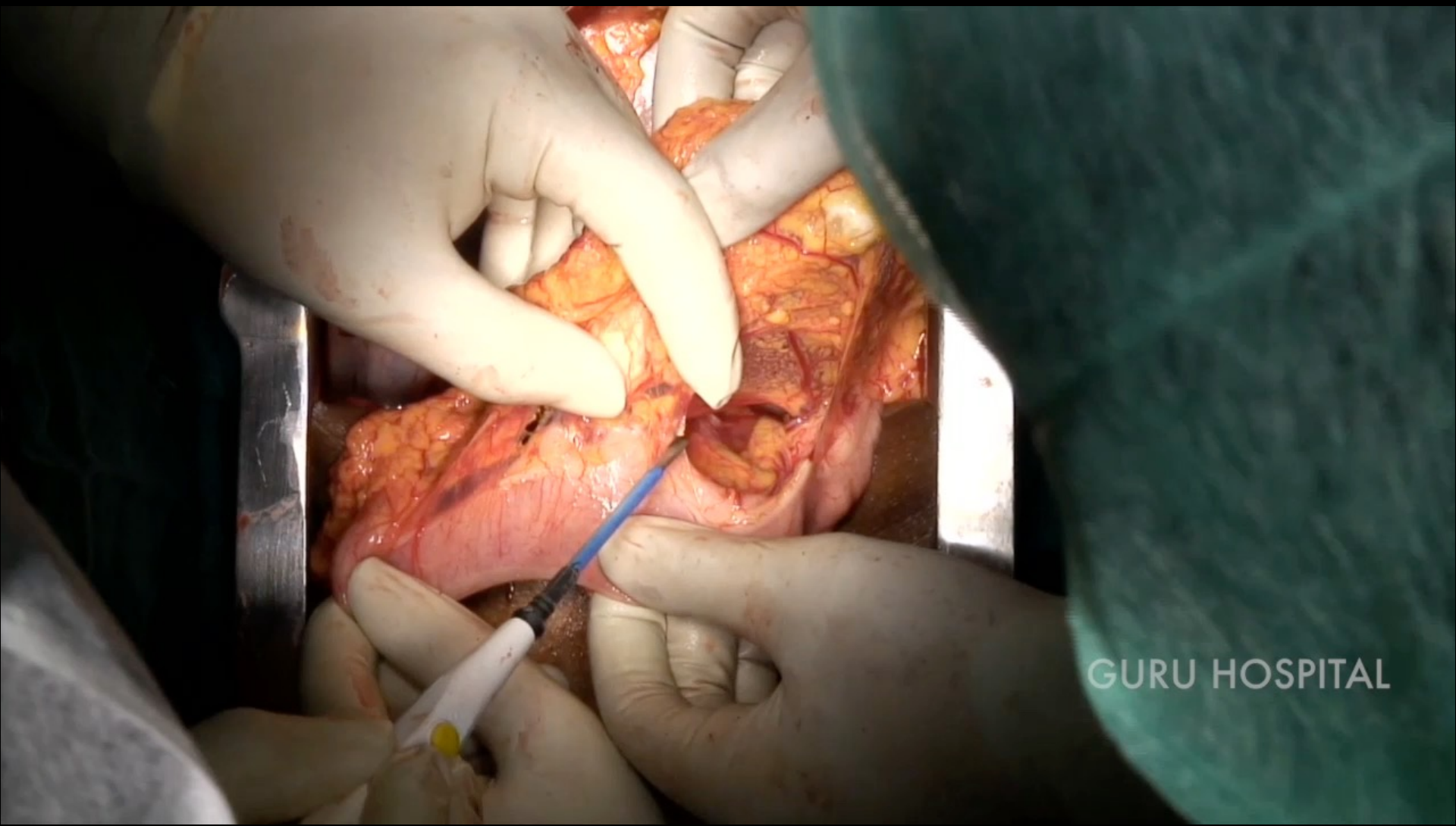
Lateral



ADEQUATE LYMPHADENECTOMY HOW MANY NODES?

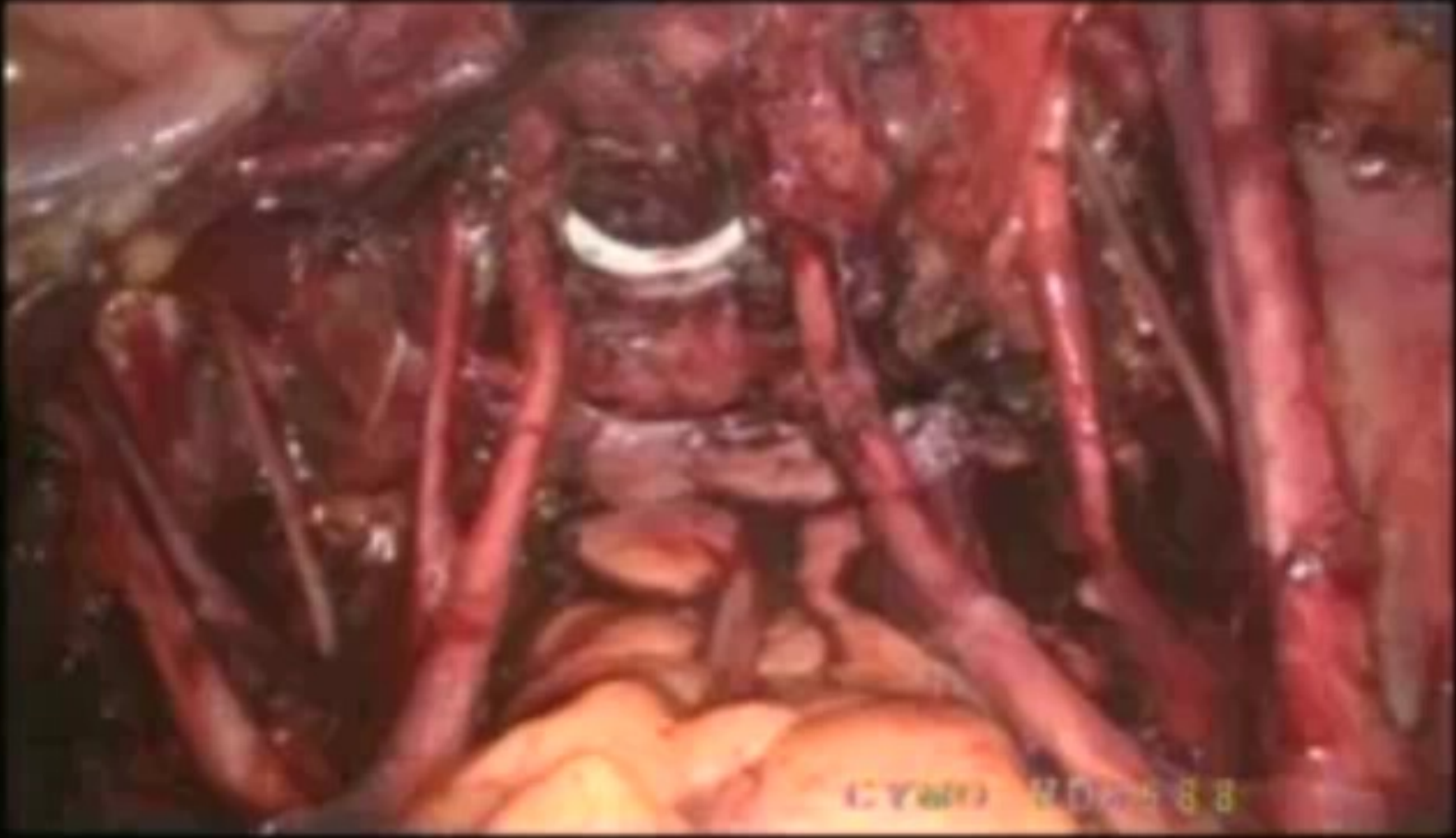
- Esophagus - 25 nodes
- Stomach - 15 nodes
- Hepatobiliary - 3 nodes
- Pancreas - 10 nodes
- Colon - 12-15 nodes





GURU HOSPITAL

COMPLETENESS OF SURGERY PLND



എത്തിച്ചേർന്നു (എത്തിച്ചേർ)

എത്തിച്ചേർന്നു (എത്തിച്ചേർ)

TRICK OF SURGERY IN SOLID TUMOUR

1. Repeated dissection in a circular fashion
2. Dissect from normal tissue
3. Do what is easy first
4. Work where there is exposure
5. Mass is encircled many times before removal
6. Avoid trauma to capsule of tumor



CHOICE OF PROCEDURE

- OPEN PROCEDURE
- LAPROSCOPIC PROCEDURE
- ROBOTIC PROCEDURE



- It does not compromise

radicality of resection



WORD FOR A SURGEON

- In all the moments of a surgeon there should be neither haste nor waste.
- It matters less how quickly an operation is done than how accurately it is done.
- Speed should result from the method and practical facility of the operation and should not be his first and formal intention.



WORD FOR A SURGEON

- every movement should tell and every action should achieve something.
- A manipulation if it requires to be carried out should not be half done and hesitatingly done. It should be deliberate, firm, intentional and final.

Lord Moynihan



ADJUVANT PRINCIPLE ?

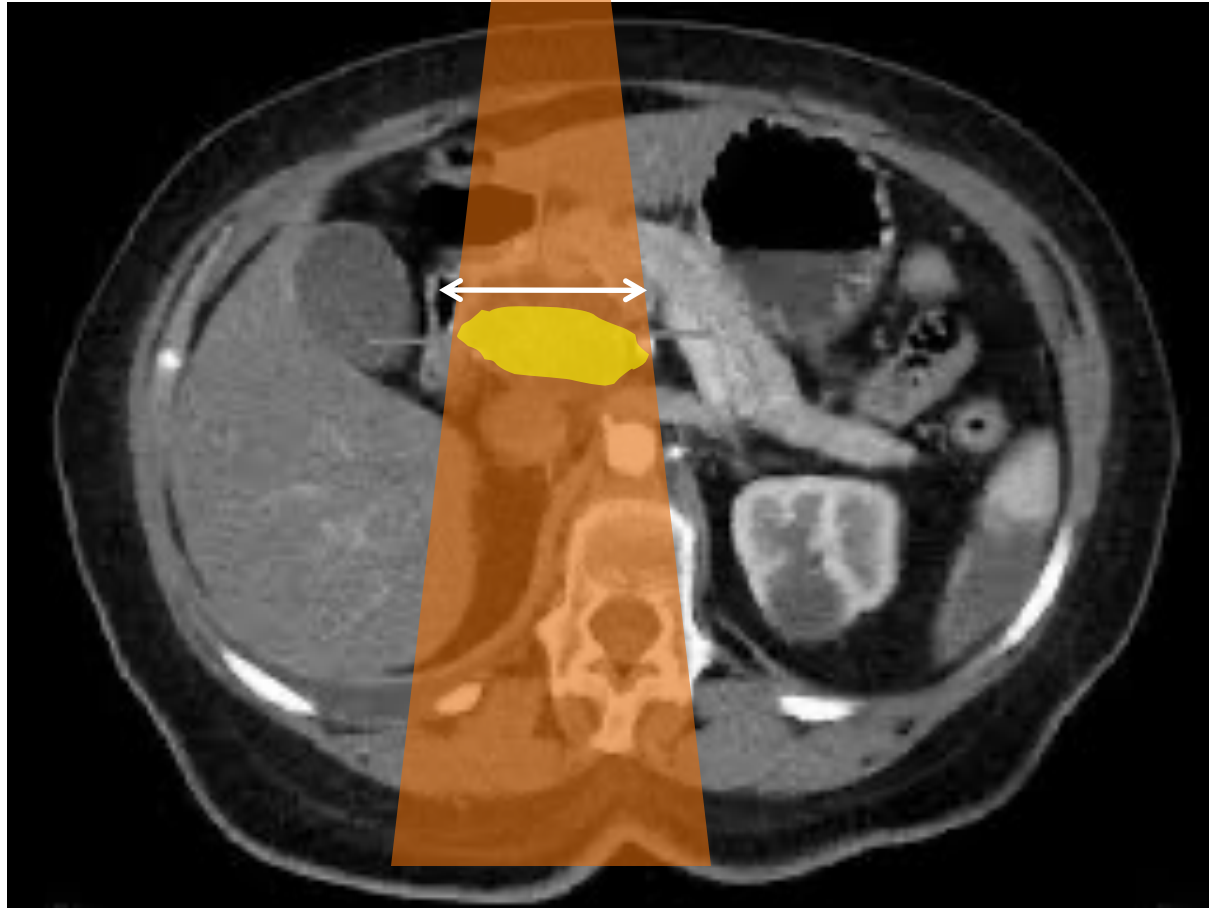


- IN MODERN ERA, BY HIGH END TECHNOLOGY
- **RADIOTHERAPY CAN BE GIVEN WITHOUT ADJACENT ORGAN DAMAGE**



CONVENTIONAL
VS
INTENSITY MODULATED RADIOTHERAPY





Direction

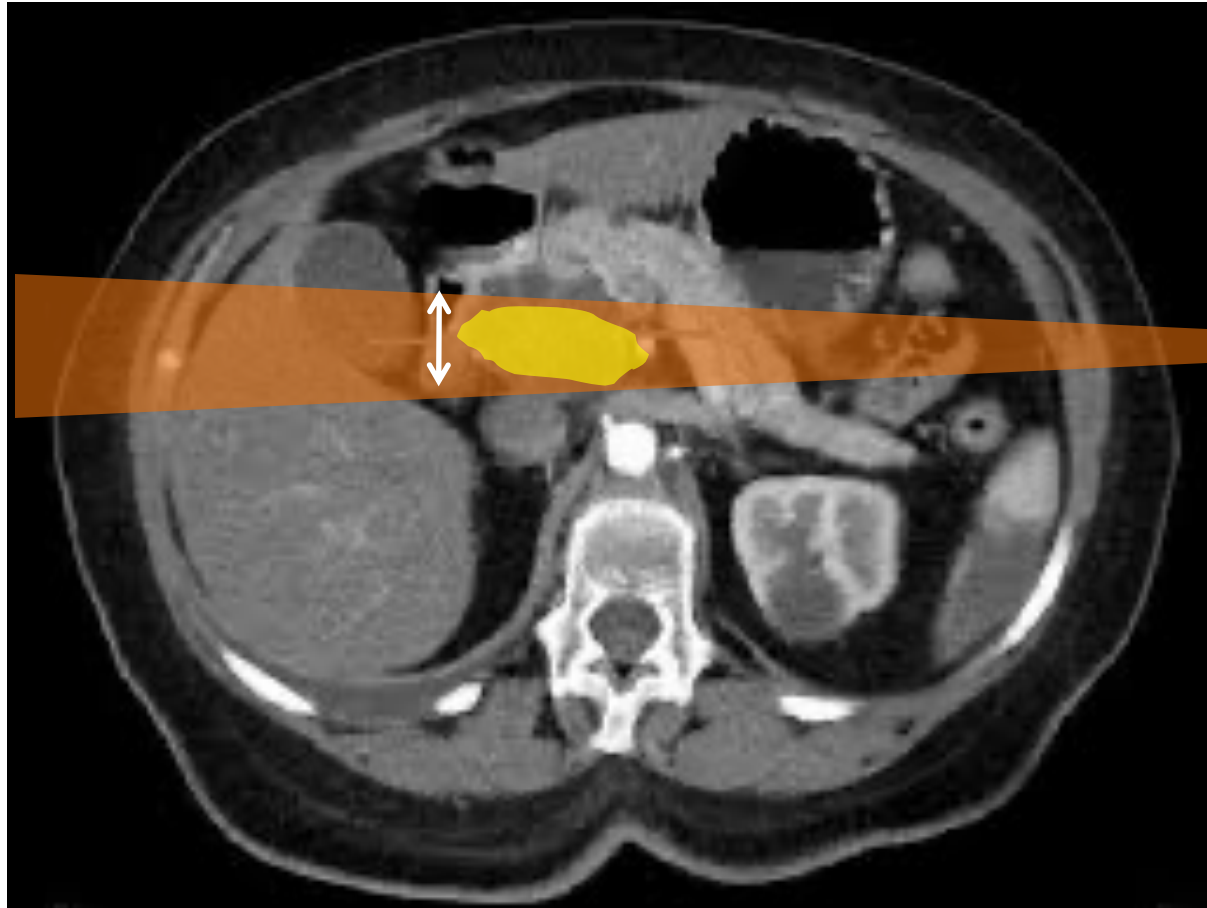
Size

Shape

உன்னால் முடியும்

உன்னால் முடியும்





Direction

Size

Shape

உன்னால் முடியும்

உன்னால் முடியும்



COLLIMATOR

VS

MULTILEAF COLLIMATER

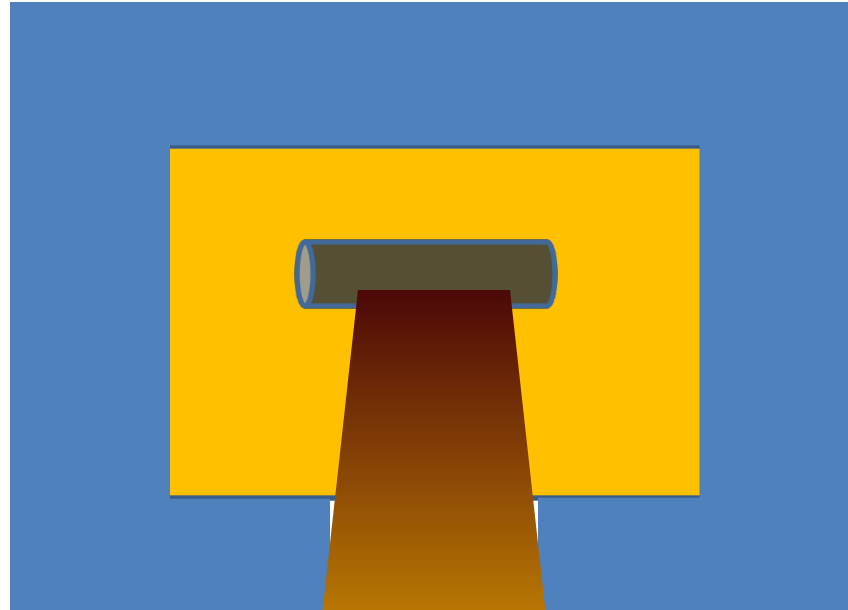


Direction

Size

Shape

Collimator



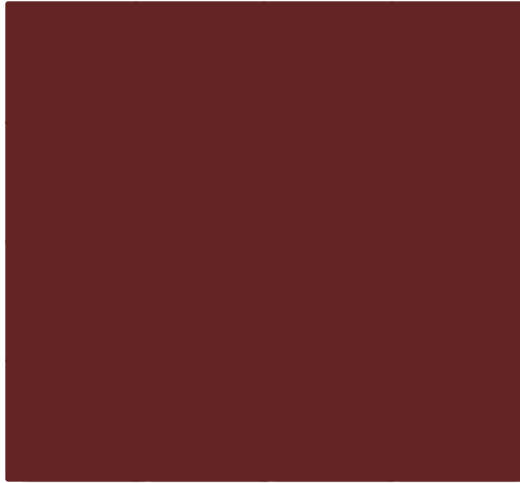
Direction

Size

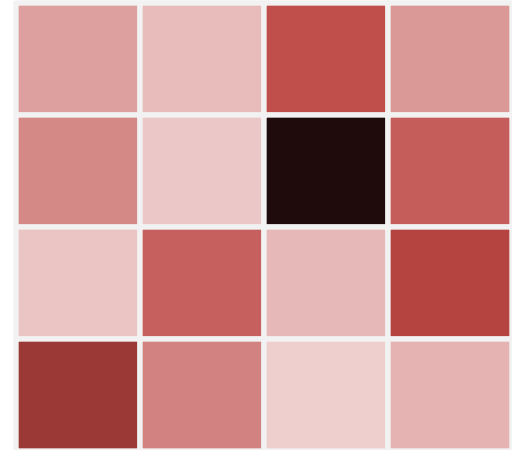
Shape

INTENSITY

CONVENTIONAL



IMRT



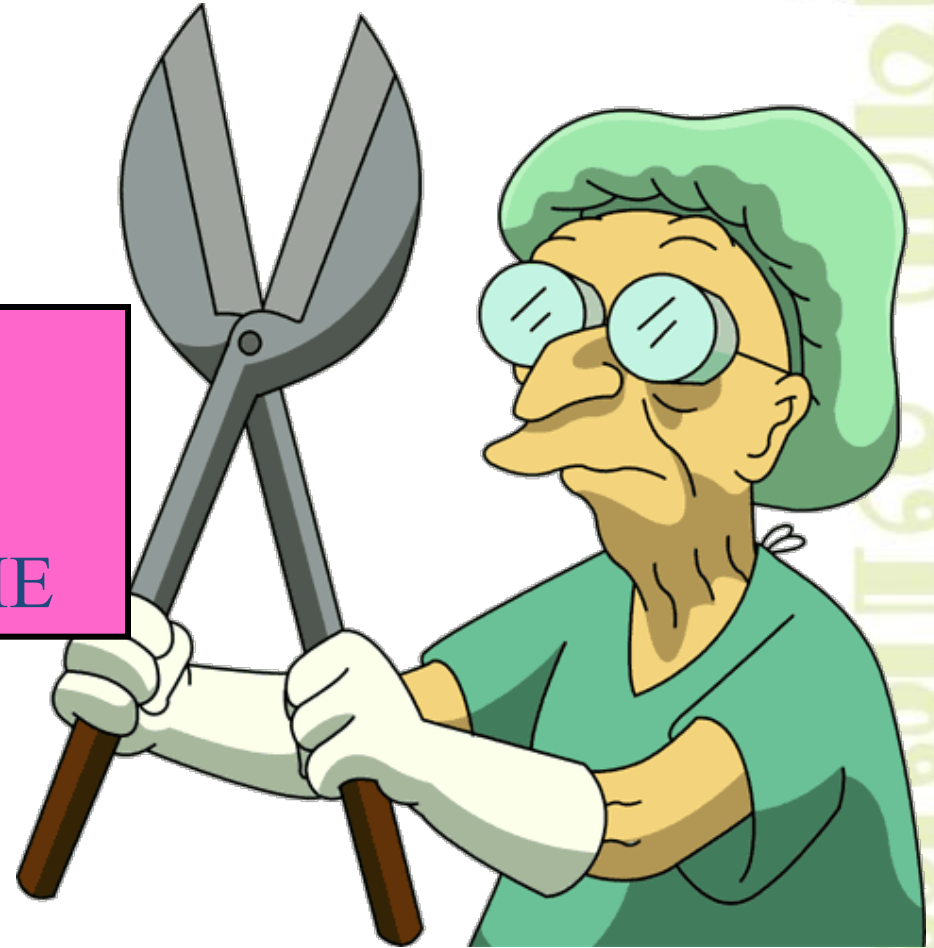
ROLE OF SURGEON



IS OPERATING SURGEON REALLY A PROGNOSTIC FACTOR?

there is a difference....

ONCOLOGICAL OUTCOME



**Surgeon as a prognostic factor in the management of pancreatic cancer
Surgeon's skill and expertise matters not hospital volume**

Elizabeth Saettler *et al* Surg. Oncol. Clin. N. Am. 2003 Jan. 9(1) 133-142



HOW SURGEON SHOULD BE?



TECHNOLOGY UPDATE

- Learn new techniques at least once a year
- Take time off to do so
- Otherwise you will be

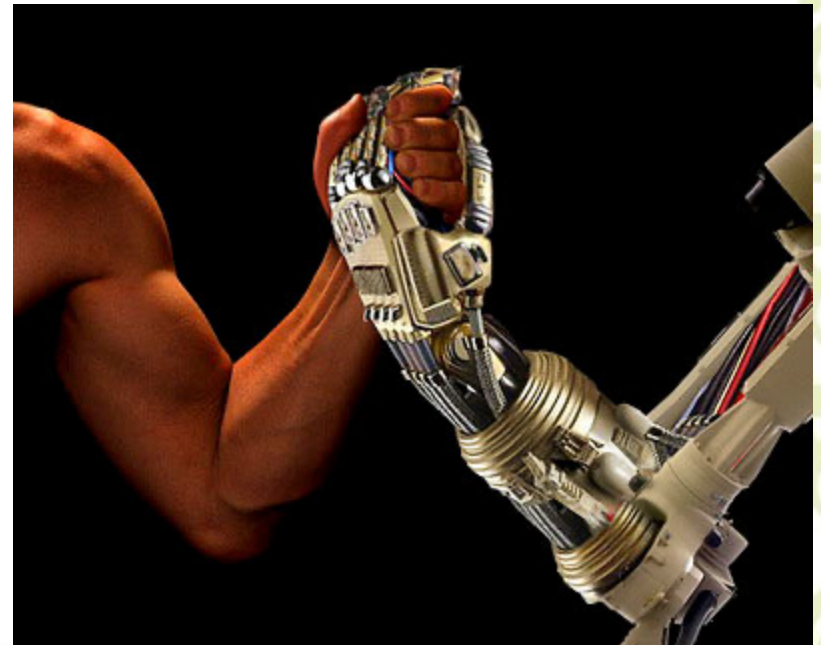
'Residue'

Someone will remove





SURGEON SHOULD BE MASTER FOR ALL MACHINES
MACHINES ARE THE SLAVES FOR SURGEON



JUST RIDE THE TECHNOLOGY



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உன்னால் முடியும்

'PERSONALIZING CANCER CARE'

“Oncology is no longer a one-size-fits-all

- " Tailor treatments to an individual's or to a tumor's unique biology, which helps us to improve outcomes for patients by matching the
- Right treatment to
- Right patient at
- Right time.“



PERSONALIZING CANCER CARE

ANGELINA ANJALAI



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உன்னால் முடியும்

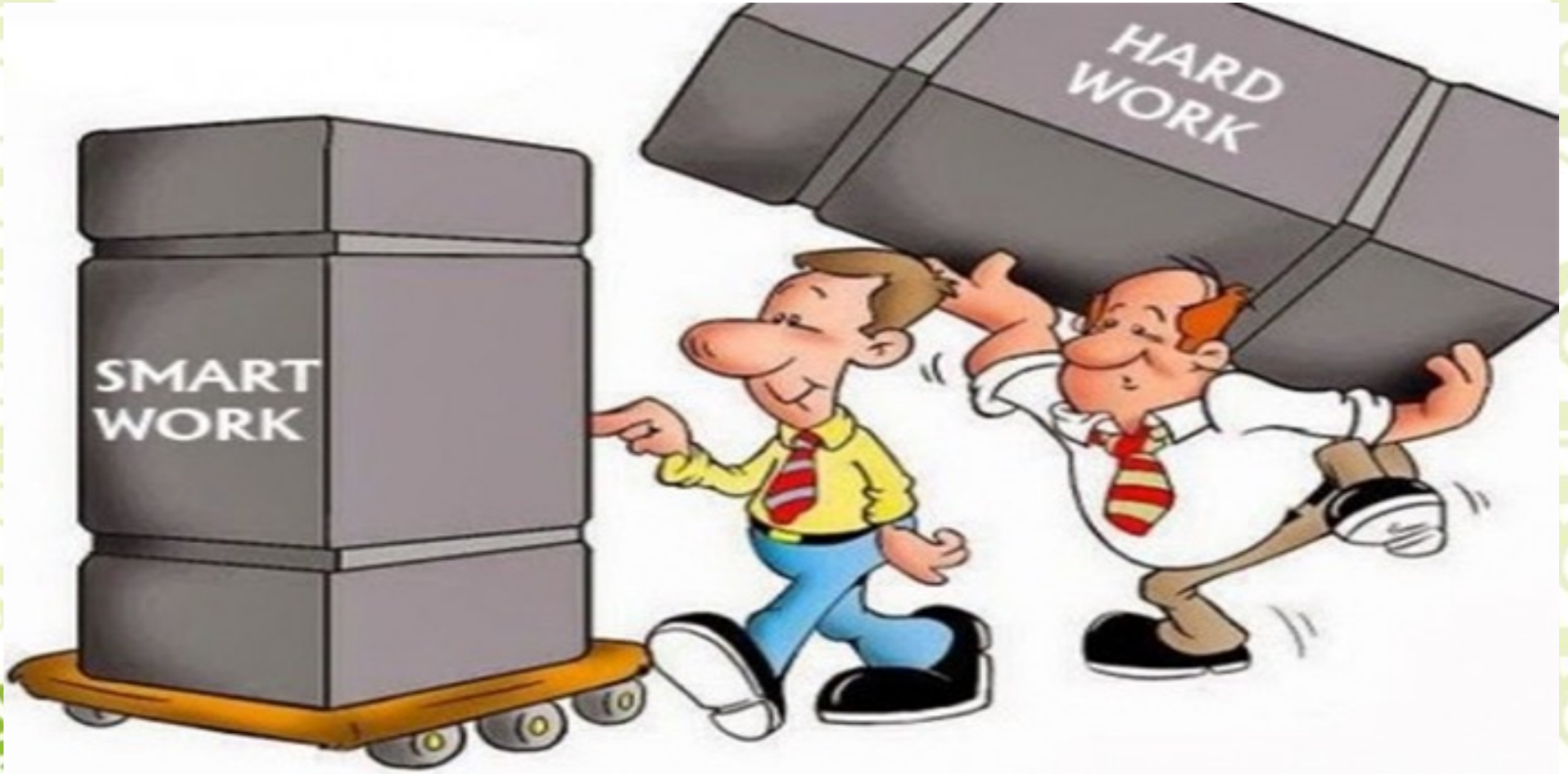
FIGHT AGAINST CANCER

FULL FORCE

**GET READY FOLKS
01 10 10**



FIGHT AGAINST CANCER



GOOD WILL

Do good.
And good will come to
you.



GIVE CONFIDENCE NOT GUARANTEE...



TEAM WORK



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உன்னால் முடியும்



உன்னால் முடியும்

உன்னால் முடியும்



செய்தக்க அல்ல செயக்கெடும் செய்தக்க

செய்யாமை யானும் கெடும்.

(466)

விளக்கம்:

செய்யத் தகுந்தது அல்லாத ஒரு செயலைச் செய்தாலும் பொருள் கெடும். செய்யத்தகுந்த செயலைச் செய்யாமையாலும் கெடும்.



**DON'T MISS
TO START EARLY TREATMENT
BY YOURSELF**





AYUDHA POOJ
Celebration

The SUPERHIT Co. Inc



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உன்னால் முடியும்

உன்னால் முடியும்

உன்னால் முடியும்



உன்னால் முடிந்தால் உன்னால் முடிந்தால்




Guru Hospital
REACHING THE UNREACHED
உன்னால் முடியும்

உன்னால் முடிந்தால் உன்னால் முடிந்தால்

THE CANCER

TO CURE OR NOT TO CURE

IS IN YOUR HANDS



SOCIAL RESPONSIBILITIES





அச்சம் வேண்டாம்

புற்றுநோயை அடியோடு அகற்ற முடியும்.